STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF REMEDIATION AND WASTE MANAGEMENT
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-2651

VARIANCE APPLICATION FOR FACILITIES LOCATED OVER SAND AND GRAVEL AQUIFERS

This form is to apply for a variance from the prohibition on new underground oil storage (UST) facilities within mapped Sand and Gravel aquifers. Maine law prohibits installation of USTs within sand and gravel aquifers mapped by the Maine Geological Survey unless a variance is obtain from the Department of Environmental Protection (DEP). See 38 MRSA § 563-A and Chapter 691, section 3-A of DEP rules. In considering whether to grant a variance, the Commissioner may consider the importance of the groundwater resource, any engineering or monitoring measures proposed by the applicant, the geology of the site and other relevant factors.

General Instructions:

1. Be sure to submit the application well in advance of the date on which you plan to construct or operate the facility.

2. Prior to completing the application, you should meet with the DEP staff to discuss the proposed facility. Call the DEP Underground Tank Registration staff at (207) 287-2651 to arrange a pre-application meeting.

3. Answer all questions. **INCOMPLETE APPLICATIONS WILL BE RETURNED**

4. If a question does not apply, indicate such and explain why.

5. All design plans, drawings, site plans and maps must be on sheets no smaller than 8 ½" x 11" and no larger than 30"x 40". All drawings, plans and maps should be folded to size 8 ½" x 11".

6. All engineering designs, reports, plans and other technical engineering documents must be signed and certified by a State of Maine Registered Professional Engineer.

7. All geologic and hydrogeologic reports must be signed and certified by a State of Maine certified geologist.

8. Within 30 days before filing the application and at least seven days before holding the required Public Informational Meeting (see paragraph 9 below), you must provide public notice. The attached form-NOTICE OF APPLICATION and PUBLIC INFORMATION MEETING has been supplied for your use.

The notice must be sent by certified mail to: the chief administrative officer (town manager, first select person etc) and the planning board chairperson of the municipality in which the facility is proposed; local public water utility or other community public water provider; abutting property owners; and other interested parties who have notified the Department of their interest in receiving variance notices. A list of the names and mailing addresses of such people may be obtained from the Department.
A copy of *the notice must also be published once in a newspaper generally circulated in the area where the facility is proposed.*

9. The DEP requires that you schedule and hold a Public Informational Meeting at a convenient time and location near the proposed facility site.

   The purpose of the meeting is to provide concerned parties an opportunity to find out what is proposed and what provisions are being made to minimize potential threats to public health and the environment. The usual format of this meeting is for the applicant to explain the application and respond to questions regarding it. This meeting also provides you the opportunity to modify the proposal if appropriate, based upon public input.

   Please see the **Time Line** at the end of this application to determine dates for mailing and publishing the notice, holding the public meeting and submitting the application.

10. Applicants should review Chapter 691 section 3-A, of DEP rules. These rules set forth the restrictions and standards regarding siting new underground oil storage facilities over mapped sand and gravel aquifers. Keep a complete copy of the application for your files.

12. If the Department determines that the new or additional information is significant or substantially modifies the application at any time after acceptance of the application as complete, you must provide notice of the additional information to interested persons who have commented on the application. The Department may also require additional public notice.

13. Send the application, including supporting material to:

Attn: Licensing Unit Leader
UST Registration Staff
Maine Department of Environmental Protection
Bureau of Remediation and Waste Management
Division of Oil and Hazardous Waste Facilities Regulation
17 State House Station
Augusta, ME 04333-0017

VARIANCE APPLICATION
FOR THE SITING OF NEW UNDERGROUND OIL STORAGE FACILITIES OVER SIGNIFICANT SAND AND GRAVEL AQUIFERS

Please Type or Print in Ink:

Name of Applicant: _____Owner ( ) Operator ( ) Check one or both

Mailing Address: _____ Telephone: _____

City: _____State:_____ Zip Code: _____

Contact person (name, address, and telephone):_____
_____

Federal Employer Identification number: _____; or Social Security number: _____

LOCATION OF PROPOSED UNDERGROUND OIL STORAGE FACILITY

Name of Facility: _____

Street or Route Number: _____

Municipality or Township: _____

County: _____

Facility Owner: (If different than applicant): _____

Owner's Mailing Address & Telephone: _____

Date notice was published _____ Name of newspaper _____

Date the Public Informational Meeting was held: _____

Approximate number of meeting attendees: _____

Issues identified at Public Informational Meeting: _____

Changes made to proposed facility to address issues identified at Public Informational Meeting:
_____

General Requirements:

1. Provide a copy of the deed to the project site or other evidence that you have sufficient title, right or interest in the property on which the proposed facility is to be sited.

2. Indicate below the basis for your variance request.

A. A Low Yield or Polluted Aquifer.

(1) A site specific hydrogeological investigation demonstrates that the proposed facility site does not overlie an aquifer even though it is mapped as such by the Maine Geological Survey; Yes____No____ If yes, attach documents to support this conclusion.

(2) A public water system services all water users within 1000 feet upgradient and 2000 feet down gradient of the proposed facility site, and the site is in an urban area or an area made up of dense commercial land uses, industrial land uses, or dense residential development not served by public sewer; Yes____ No____ If yes, attach documents to support this conclusion.

(3) The installation of drinking water supply wells within 1000 feet upgradient or within 2000 feet down gradient is prohibited by property deed restrictions, municipal land use ordinance, or a zoning rule of the Maine Land Use Regulation Commission (LURC); Yes____ No____ If yes, attach documentation to support this conclusion.

(4) Hydrogeological studies or ground water quality testing data show that the aquifer underlying the proposed facility site is polluted with one or more man-made contaminants in concentrations exceeding federal maximum contaminant levels (MCLs), or the State of Maine maximum exposure guideline (MEG) established by the Maine Bureau of Health, and the aquifer's ground water has not been and is not now the subject of a commissioner-supervised remediation

effort with the goal of the eventual restoration of or the protection of ground water in the aquifer to a quality suitable for human consumption; Yes____ No____ If yes, attach documentation to support this conclusion.

(5) Other documentation that demonstrates that the aquifer is unsuitable or unavailable as a future public or private drinking water resource: Yes____ No____ If yes, attach documentation to support this conclusion.

B. Moderate Yield Aquifer.

(1) The proposed facility site is on an aquifer, or a portion thereof, mapped by the Maine Geological Survey as having a moderate potential for future use as a water supply resource, with yields generally less than 50 gallons per minute as confirmed by a commissioner-approved hydrogeological test conducted in accordance with Chapter 691, Appendix T (attached); Yes____ No____ If yes, attach documentation to support this conclusion.

(2) Is the facility designed and installed to include a combination of complementary leak and spill prevention equipment, discharge monitoring equipment, stand-by remediation system equipment, or other engineering and monitoring measures that collectively are more stringent than State or Federal requirements and that are determined by the Commissioner to further reduce the risk of oil discharges and the likelihood of future ground water contamination? Yes____ No____ If yes, attach documentation to support this conclusion.

NOTE: The following is an example of a combination of additional facility design and monitoring measures for applicable motor fuel facilities that would meet with the Commissioner's approval by minimizing the risk of discharges in the product dispensing system and of overfills, as well as improving the detection of routine small discharges to the environment:

(i) installation of suction piping systems and liquid tight dispenser sumps with continuous leak monitoring;

(ii) annual sump tightness testing;

(iii) installation of flush mounted 25-gallon overfill spill containment buckets; and

(iv) the installation and sampling of a ground water monitoring well network surrounding the facility.

Where ground water monitoring wells are installed, they must be sampled quarterly and the samples must be analyzed in accordance with Appendix S of this rule. For facilities storing gasoline, samples must be analyzed for gasoline, benzene, and methyl tertiary butyl ether (MTBE). For facilities storing diesel fuel, heating oil or waste oil, fuel oil analyses must be performed. The installation and sampling of any ground water monitoring wells must be conducted under the supervision of a Maine-certified geologist. Positive results must be reported to the Commissioner as evidence of a possible leak in accordance with section 5(D) or section 7(D), as applicable. Monitoring wells must be made accessible to the Commissioner or the Commissioner's agents for inspection and collecting water samples in accordance with Chapter 2 of the Department Rules.

NOTE: Maine law prohibits the DEP from granting a variance if any part of the proposed facility site overlies a mapped aquifer that has high potential as a future public drinking water resource.

C. High potential aquifers include:

(a) Any area designated on a Maine Geological Survey "Significant Sand and Gravel Aquifer Map" as a surficial deposit generally with yields greater than 50 gallons per minute;

(b) An aquifer or ground water resource protection zone as designated in a municipal ordinance or a LURC zoning rule;

(c) The source water or recharge area of a community public drinking water system supply well that is in the process of being developed, or within 1000 feet of such a well, whichever is greater, provided the aquifer has been found to yield more than 50 gallons per minute, based on hydrogeological pump test data and analysis by a Maine-certified geologist; or

(d) A portion of a mapped aquifer that, based on a borehole test conducted in the center of a proposed facility site and in accordance with Appendix T of this rule, is expected to yield more than 50 gallons per minute.

3. Attach a list of names and mailing addresses of all abutters to the property on which the facility is proposed.

4. Complete and enclose a registration form for the proposed facility as required by Chapter 691, Section 4.

5. Enclose a scale plan view drawing of the proposed facility tied to a property marker or other permanent structure. The drawing must show the proposed location and footprint of all facilities including all tanks, piping and dispensers and other facility components intended to contain product (either as a liquid or vapor) relative to other site features, including existing buildings and adjacent roads (See attachments A and B).

6. Enclose a copy of the MGS aquifer map on which you have plotted the UTM (Universal Transverse Mercator) map coordinates of the facility foot print and the groundwater monitoring wells. Plot the coordinates using North American Datum (NAD 83) standards to sub-meter accuracy & precision.

7. Include a description (narrative, site plans, drawings, maps, etc.) of engineering and monitoring plans that exceed regulatory requirements. The narrative must explain in detail how these plans collectively reduce the risk of future groundwater contamination at the site.

By signing this application, the applicant certifies that he or she has given public notice, and held a Public Informational Meeting in accordance with the application instructions and Chapter 691, Section 3-A(6) of DEP rules.

The applicant further certifies under penalty of law that he or she has examined and is familiar with the information submitted in this document and all attachments thereto and that, based on his or her inquiry of those individuals immediately responsible for obtaining the information, believes the information to be true, accurate and complete. The applicant is aware that there are significant penalties for submitting false information, including the possibility of fine and/or imprisonment.

Date:_____ _____
(Signature of Owner-Applicant)

_____
(Printed Name and Title)

Date:_____ _____
(Signature of Operator-Applicant)
(if different from above)

_____
(Printed Name and Title)

NOTE: Where owner and operator is not the same person, either may obtain the variance but both must sign and certify the application.

NOTICE OF APPLICATION
and
PUBLIC INFORMATIONAL MEETING

Please take notice that _____
_____
(name, address, and phone number of applicant)

has filed a variance application with the Maine Department of Environmental Protection (DEP) pursuant to the provisions of Title 38 M.R.S.A. § 563-C(3) for the siting of a new underground oil storage facility near a drinking water supply on _____ .
(estimated submittal date)

The application is for _____
(summary of project)

at_____in_____.
(project street address) (municipality)

The applicant will hold a **Public Informational Meeting _** _____, located on
(facility)

_____in_____ between the
(Street address) (Town or City and State)

hours of _____ and _____on_____. The purpose of this meeting is to
(start time) (end time) (Date)

provide information about this project to any interested parties.

Interested person also may request that the Board of Environmental Protection hold a public hearing on the variance application. The request must be in writing and must be received by the Department, no later than twenty (20) days after the application is accepted by the Department as complete for processing. Written comment from interested parties will be accepted throughout the processing of the application.

The application and supporting documentation are available for review at the Augusta office, located in the Ray Building on the AMHI Complex off Hospital Street during normal working hours. A copy of the application and supporting documentation may also be seen at the municipal office in _____, Maine.
(town)

Send written comments to the **Licensing Unit Leader, Division of Oil and Hazardous Waste Facilities Regulation** at the **Bureau of Remediation and Waste Management, 17 State House Station, Augusta, Maine 04333-0017**.

1. The combined Notice of Intent to File must be advertised once by the applicant in a newspaper of general circulation in the area of the project location, and is to be mailed by certified mail to:

(a) The chief administrative officer and planning board chairperson of the municipality in which the facility is proposed to be located, or to the county commissioners and the LURC director if the facility is proposed in an unorganized township or plantation;

(b) The local public water utility or other community public water provider, if any;

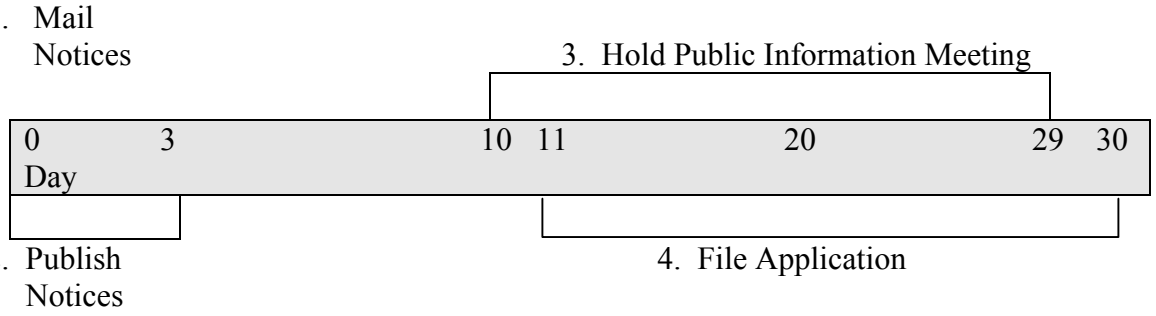
(c) Abutters of the property on which the facility is proposed;

(d) Other interested persons who have requested in writing of the commissioner to receive variance notices, a list of such persons and their mailing addresses to be maintained by the commissioner; and,

2. A copy of the published notice is to be submitted with the application.

3. Please refer to the **Time Line**.

Time Line of Combined Notice



Steps:

1. **Mail Notices** - The clock starts at day 0 when the notices are sent by certified mail to the abutters and to the municipal office.

2. **Public Notices -** Publication data must be within three (3) days of mailing notices. Publication must be made in newspaper of general circulation in the area of the project.

3. **Hold Public Informational Meeting –** A meeting must be held at least ten (10) days after mailing notices and seven (7) days after publishing notices. The meeting must be held before the application is filed.

4. **File Application -** Application must be filed with the Department no more than thirty (30) days after the notices are mailed. Please allow yourself ample time between the meeting date and the filing date to be able to report results of the meeting on the application. You may also find that as a result of the public meeting, you may want or need to modify your application to address concerns of the public.

Note: Days refer to calendar days. If day 30 falls on a weekend or holiday, the deadline moves to the next business day.

APPENDIX T

Determination of the Water Supply Potential of a Proposed New Underground Oil Storage Facility Site On A Mapped Significant Sand and Gravel Aquifer

If the site of the proposed facility falls within a zone mapped as generally yielding 10 to 50 gallons per minute (g.p.m.), but possibly more than 50 gallons per minute in some locations, the applicant must implement a limited hydrogeological evaluation to determine whether the site is located on a previously unrecognized high yield zone (well yield greater than 50 g.p.m.) of the aquifer.

The evaluation may be as extensive as the applicant chooses, but at a minimum it must demonstrate to the commissioner's satisfaction whether or not a properly constructed well in the sand and gravel aquifer beneath the site would yield greater than 50 gallons per minute. The design of the evaluation, the field work and the written report must be supervised and certified by a Maine-certified geologist with demonstrated expertise in hydrogeology.

The Sand and Gravel Aquifer Mapping Program at the Maine Geological Survey has used a single-borehole evaluation to estimate the projected long-term yield of aquifers in areas where no other information is available. The techniques are described on pages 15-18 of Maine Geological Survey Open File No. 98-2, Hydrogeology and Water Quality of Significant Sand and Gravel Aquifers in Parts of Piscataquis and Somerset Counties, Maine, 1998, Nichols, W. J., Neil, C. D., Locke, D. B. and Foley, M. E. (authors). The method requires a borehole advanced to the bedrock surface with continuous soil sampling. Geological information along with the grain size analysis of the soil samples will be used to estimate the hydraulic conductivity of the strata, and the aquifer thickness will be used to calculate a transmissivity value and to estimate the long-term yield of a well at that location. An evaluation using this methodology is the minimum that the commissioner would accept. The commissioner would also accept the results of a properly conducted and interpreted pumping test.

Definitions

1. Private water supply: "Private water supply" means any dug, drilled or other type of well or spring or other source of water which collects water for human or animal consumption and is not a public water supply.

2. Public drinking water supply: "Public drinking water supply" means any well or other source of water that furnishes water to the public for human consumption for at least 15 connections, regularly serves an average of at least 25 individuals daily at least 60 days out of the year, or that supplies bottled water for sale. The water sources of restaurants, motels, campgrounds and other establishments providing water for human consumption are considered transient public water supplies.

3. Source water protection area: "Source water protection area" means an area that contributes recharge water to a public drinking water supply that is mapped by the Department of Human Services.

4. Significant Sand and Gravel Aquifer: Significant sand and gravel aquifer means a porous formation of ice contact and glacial outwash sand and gravel that contains significant recoverable quantities of water likely to supply drinking water supplies and is mapped by the Maine Geological Survey.

5. School water supply system: "School water supply" is a well or other source of water that serves an institution of formal classroom instruction of children in grades K through 8.

6. Facility: "Facility" means any underground oil storage facility except for a facility used solely for the storage of heating oil that is stored on site.

ENGINEERING AND MONITORING MEASURES

The following is a menu of Engineering and Monitoirng Measures beyond current minimum regulatory requirements. The Department considers these to provide increased level of groundwater protection in proximity to existing and future supplies.

ENGINEERING MEASURES

Potential Sources Of Releases	Preventive Engineering Options
Delivery spills	Flush mounted 25 gallon Spill containers
Leaking submersible pump Manifold and/or pressurized Product piping	Install intrinsically safe Suction piping system
Dispenser sump leaks.	Dispenser sumps with monitoring Probes and annual dispenser sump Leaking testing.
Liquid and/or vapor releases from Stage II vapor recovery piping	Secondary containment of Stage II Piping with continuous monitoring

Site Monitoring Measures

Install facility monitoring well array and implement Periodic (quarterly) groundwater monitoring. Pre-install soil vapor extraction system with periodic (quarterly) tracer/soil-gas testing (in cases where monitoring wells are impractical).

Rev. 10/23/02

Example of Retail Facility Site Drawing